Hyongsuk Kim

List of Publications by Year
in descending order

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133	4,231	185998 28	118652 62
papers	citations	h-index	g-index

136	136	136	2650
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	TSFD-Net: Tissue specific feature distillation network for nuclei segmentation and classification. Neural Networks, 2022, 151, 1-15.	3.3	24
2	A pixel-level coarse-to-fine image segmentation labelling algorithm. Scientific Reports, 2022, 12, .	1.6	2
3	Implementation of Neuro-Memristive Synapse for Long-and Short-Term Bio-Synaptic Plasticity. Sensors, 2021, 21, 644.	2.1	9
4	PMED-Net: Pyramid Based Multi-Scale Encoder-Decoder Network for Medical Image Segmentation. IEEE Access, 2021, 9, 55988-55998.	2.6	16
5	DAM: Hierarchical Adaptive Feature Selection Using Convolution Encoder Decoder Network for Strawberry Segmentation. Frontiers in Plant Science, 2021, 12, 591333.	1.7	18
6	Neuro-Memristive Circuit for Bio-Synaptic Plasticity. , 2021, , .		0
7	Multi-Scale Context Aggregation for Strawberry Fruit Recognition and Disease Phenotyping. IEEE Access, 2021, 9, 124491-124504.	2.6	20
8	A Deep Learning Based Approach for Strawberry Yield Prediction via Semantic Graphics. , 2021, , .		5
9	Guided Soft Attention Network for Classification of Breast Cancer Histopathology Images. IEEE Transactions on Medical Imaging, 2020, 39, 1306-1315.	5.4	102
10	CED-Net: Crops and Weeds Segmentation for Smart Farming Using a Small Cascaded Encoder-Decoder Architecture. Electronics (Switzerland), 2020, 9, 1602.	1.8	58
11	Deep Neural Network-Based System for Autonomous Navigation in Paddy Field. IEEE Access, 2020, 8, 71272-71278.	2.6	44
12	SEEK: A Framework of Superpixel Learning with CNN Features for Unsupervised Segmentation. Electronics (Switzerland), 2020, 9, 383.	1.8	22
13	Accelerating projections to kernel-induced spaces by feature approximation. Pattern Recognition Letters, 2020, 136, 31-39.	2.6	0
14	Global dynamics of Chua Corsage Memristor circuit family: fixed-point loci, Hopf bifurcation, and coexisting dynamic attractors. Nonlinear Dynamics, 2020, 99, 3169-3196.	2.7	22
15	Nonlinear Dynamics, Switching Kinetics and Physical Realization of the Family of Chua Corsage Memristors. Electronics (Switzerland), 2020, 9, 369.	1.8	11
16	Microtubules as Sub-Cellular Memristors. Scientific Reports, 2020, 10, 2108.	1.6	35
17	Distance Weighted Loss for Forest Trail Detection Using Semantic Line. Lecture Notes in Computer Science, 2020, , 302-311.	1.0	4
18	Osteoporosis detection in panoramic radiographs using a deep convolutional neural network-based computer-assisted diagnosis system: a preliminary study. Dentomaxillofacial Radiology, 2019, 48, 20170344.	1.3	90

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19	On Learning With Nonlinear Memristor-Based Neural Network and its Replication. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 3906-3916.	3.5	10
20	Precise Modeling of the Protective Effects of Quercetin against Mycotoxin via System Identification with Neural Networks. International Journal of Molecular Sciences, 2019, 20, 1725.	1.8	4
21	Accurate Modeling of Complex Antitoxin Effect of Quercetin Based on Neural Networks. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950013.	0.7	2
22	Memristive Imitation of Synaptic Transmission and Plasticity. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 3458-3470.	7.2	41
23	Learning Semantic Graphics Using Convolutional Encoderâ€“Decoder Network for Autonomous Weeding in Paddy. Frontiers in Plant Science, 2019, 10, 1404.	1.7	45
24	Why are Memristor and Memistor Different Devices?. , 2019, , 247-265.		0
25	Behavior of Multiple Memristor Circuits. , 2019, , 913-940.		0
26	Memristor Bridge-Based Artificial Neural Weighting Circuit. , 2019, , 619-635.		0
27	Three Fingerprints of Memristor. , 2019, , 165-196.		7
28	Brains Are Made of Memristors. , 2019, , 315-350.		1
29	Excitatory and inhibitory actions of a memristor bridge synapse. Science China Information Sciences, 2018, 61, 1.	2.7	7
30	Exact Analysis and Physical Realization of the 6-Lobe Chua Corsage Memristor. Complexity, 2018, 2018, 1-21.	0.9	16
31	Hybrid no-propagation learning for multilayer neural networks. Neurocomputing, 2018, 321, 28-35.	3.5	29
32	Morris-Lecar model of third-order barnacle muscle fiber is made of volatile memristors. Science China Information Sciences, 2018, 61, 1.	2.7	14
33	Accurate Natural Trail Detection Using a Combination of a Deep Neural Network and Dynamic Programming. Sensors, 2018, 18, 178.	2.1	13
34	Building cellular neural network templates with a hardware friendly learning algorithm. Neurocomputing, 2018, 312, 276-284.	3.5	21
35	Oscillation with 4-Lobe Chua Corsage Memristor. IEEE Circuits and Systems Magazine, 2018, 18, 14-27.	2.6	33
36	Automatic Detection of Paprika Diseases/Pests Outbroken during the Hydroponic Cultivation in Greenhouse using Artificial Intelligence. Journal of Institute of Control, Robotics and Systems, 2018, 24, 1020-1024.	0.1	2

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37	A Simple Oscillator Using Memristor. Studies in Computational Intelligence, 2017, , 19-58.	0.7	5
38	Chua Corsage Memristor: Phase Portraits, Basin of Attraction, and Coexisting Pinched Hysteresis Loops. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730011.	0.7	43
39	Third-Order Memristive Morrisâ€“Lecar Model of Barnacle Muscle Fiber. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730015.	0.7	18
40	A Circuit-Based Neural Network with Hybrid Learning of Backpropagation and Random Weight Change Algorithms. Sensors, 2017, 17, 16.	2.1	19
41	A Neural Network Circuit Development via Software-Based Learning and Circuit-Based Fine Tuning. Lecture Notes in Computer Science, 2017, , 216-228.	1.0	0
42	Linearized Programming of Memristors for Artificial Neuro-Sensor Signal Processing. Sensors, 2016, 16, 1320.	2.1	2
43	ER Stress-Mediated Signaling: Action Potential and Ca2+ as Key Players. International Journal of Molecular Sciences, 2016, 17, 1558.	1.8	170
44	Chua Corsage Memristor Oscillator via Hopf Bifurcation. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630009.	0.7	60
45	Design of a Low-Frequency Oscillator with PTC Memristor and an Inductor. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630021.	0.7	6
46	Memristive Model of the Barnacle Giant Muscle Fibers. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630001.	0.7	16
47	Design of cellular neural network architecture using memristors. , 2015, , .		0
48	A memristor emulator as a replacement of a real memristor. Semiconductor Science and Technology, 2015, 30, 015007.	1.0	52
49	A Generic Model of Memristors With Parasitic Components. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 891-898.	3.5	70
50	Oscillator Made of Only One Memristor and One Battery. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1530010.	0.7	27
51	Linear programming of voltage-controlled memristors with an anti-serial memristor circuit. , 2015, , .		1
52	A Circuit-Based Learning Architecture for Multilayer Neural Networks With Memristor Bridge Synapses. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 215-223.	3.5	129
53	Memristor Bridge Synapse-based Neural Network Circuit Design and Simulation of the Hardware-Implemented Artificial Neuron. Journal of Institute of Control, Robotics and Systems, 2015, 21, 477-481.	0.1	2
54	A mutator-based meminductor emulator circuit. , 2014, , .		22

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55	Transient Behaviors of Multiple Memristor Circuits Based on Flux Charge Relationship. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2014, 24, 1430006.	0.7	20
56	Memristor Bridge-Based Artificial Neural Weighting Circuit. , 2014, , 249-265.		2
57	Learning with memristor bridge synapse-based neural networks. , 2014, , .		2
58	Fingerprints of a memristor. , 2014, , .		2
59	Operational characteristics of multi-memristor circuits. , 2014, , .		1
60	Mutator-Based Meminductor Emulator for Circuit Applications. Circuits, Systems, and Signal Processing, 2014, 33, 2363-2383.	1.2	44
61	Brains Are Made of Memristors. IEEE Circuits and Systems Magazine, 2014, 14, 12-36.	2.6	135
62	Why Are Memristor and Memistor Different Devices?. , 2014, , 95-112.		6
63	Charge Controlled Meminductor Emulator. Journal of Semiconductor Technology and Science, 2014, 14, 750-754.	0.1	47
64	Features of memristor emulator-based artificial neural synapses. , 2013, , .		3
65	Three Fingerprints of Memristor. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 3008-3021.	3.5	473
66	Composite Behavior of Multiple Memristor Circuits. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 2688-2700.	3.5	61
67	EXPANDABLE CIRCUITS OF MUTATOR-BASED MEMCAPACITOR EMULATOR. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1330017.	0.7	26
68	Composite memristance of parallel and serial memristor circuits. , 2013, , .		1
69	IMPASSE POINTS, MUTATORS, AND OTHER CHUA CREATIONS. , 2013, , 25-35.		0
70	Neural Synaptic Weighting With a Pulse-Based Memristor Circuit. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 148-158.	3.5	307
71	Memristor Bridge Synapses. Proceedings of the IEEE, 2012, 100, 2061-2070.	16.4	229
72	Memistor Is Not Memristor [Express Letters]. IEEE Circuits and Systems Magazine, 2012, 12, 75-78.	2.6	16

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73	HODGKINâ€“HUXLEY AXON IS MADE OF MEMRISTORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1230011.	0.7	226
74	HIGHLY ACCURATE DOUBLET GENERATOR FOR MEMRISTOR-BASED ANALOG MEMORY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250153.	0.7	10
75	Memristor Emulator for Memristor Circuit Applications. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2422-2431.	3.5	326
76	Memristor emulator with off-the-shelf solid state components for memristor application circuits. , 2012, , .		1
77	Why Are Memristor and Memistor Different Devices?. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2611-2618.	3.5	12
78	Memristor Bridge Synapse-Based Neural Network and Its Learning. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 1426-1435.	7.2	312
79	Memristance drift avoidance with charge bouncing for memristor-based nonvolatile memories. Journal of the Korean Physical Society, 2012, 61, 1418-1421.	0.3	3
80	A Voltage Mode Memristor Bridge Synaptic Circuit with Memristor Emulators. Sensors, 2012, 12, 3587-3604.	2.1	71
81	Memristor circuit for artificial synaptic weighting of pulse inputs. , 2012, , .		9
82	NEURONS ARE POISED NEAR THE EDGE OF CHAOS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2012, 22, 1250098.	0.7	121
83	Memristor bridge circuit for neural synaptic weighting. , 2012, , .		9
84	Heading direction computation of golf-ball collecting robot using vanishing points. , 2011, , .		1
85	Autonomous technologies of global vision-based golf ball collection robot. , 2011, , .		4
86	Implementation of a Synchronized Oscillator Circuit for Fast Sensing and Labeling of Image Objects. Sensors, 2011, 11, 3401-3417.	2.1	5
87	Boosting-Based On-Road Obstacle Sensing Using Discriminative Weak Classifiers. Sensors, 2011, 11, 4372-4384.	2.1	3
88	Accurate and Robust Surface Measurement Using Optimal Structured Light Tracking Method. IEICE Transactions on Information and Systems, 2010, E93-D, 293-299.	0.4	1
89	Seam-line determination for image mosaicking: A technique minimizing the maximum local mismatch and the global cost. ISPRS Journal of Photogrammetry and Remote Sensing, 2010, 65, 86-92.	4.9	66
90	Textures in magnetic resonance images of the ischemic rat brain treated with an anti-inflammatory agent. Clinical Imaging, 2010, 34, 7-13.	0.8	5

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91	IMPLEMENTATION OF THE COMPLEX PROCESSING OF DYNAMIC PROGRAMMING WITH NONLINEAR TEMPLATES OF CELLULAR NEURAL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2010, 20, 2109-2121.	0.7	0
92	Memristor-based multilevel memory. , 2010, , .		86
93	Chaotic Scan: A Low Complexity Video Transmission System for Efficiently Sending Relevant Image Features. IEEE Transactions on Circuits and Systems for Video Technology, 2010, 20, 317-321.	5.6	12
94	Binary synchronization of chaos in hybrid cellular automata for low complexity image compression and transmission. , 2010, , .		3
95	Manipulator inverse dynamics computation on FPGA for reconfigurable applications. , 2010, , .		3
96	Circular-buffered architecture for Cellular Neural Networks-based analog Viterbi decoder. , 2010, , .		0
97	Binary synchronization in cellular automata for building compact CDMA systems. , 2009, , .		4
98	BINARY CHAOS SYNCHRONIZATION IN ELEMENTARY CELLULAR AUTOMATA. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2009, 19, 2871-2884.	0.7	19
99	Contour Tracking Using Centroid Distance Signature and Dynamic Programming Method. , 2009, , .		6
100	Application of Poincare-Mapping of Voiced-Speech Segments for Emotion Sensing. Sensors, 2009, 9, 9858-9872.	2.1	1
101	Comparative study of Matrix exponential and Taylor series discretization methods for nonlinear ODEs. Simulation Modelling Practice and Theory, 2009, 17, 471-484.	2.2	23
102	Deinterlacing Digital Images by Selective Use of Equi-Displacement Optical Flows. , 2009, , .		0
103	A NEW CNN OSCILLATOR MODEL FOR PARALLEL IMAGE SEGMENTATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 1999-2015.	0.7	4
104	A robust depth measurement method with optimal trace tracking of structured light using dynamic programming. , 2008, , .		1
105	GENERATION OF COMPLEX STOCHASTIC TEXTURES USING CELLULAR NEURAL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 3171-3181.	0.7	1
106	Lane departure identification on highway with searching the region of interest on hough space. , 2007, , .		5
107	Road Boundary Detection Based on the Dynamic Programming and the Randomized Hough Transform. , 2007, , .		6
108	Packet Loss Rate Prediction Using the Sparse Basis Prediction Model. IEEE Transactions on Neural Networks, 2007, 18, 950-954.	4.8	28

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109	Road oundary detection with double filtering for intelligent vehicle. , 2007, , .		1
110	Parallel Implementation of Elastic Grid Matching Using Cellular Neural Networks. Lecture Notes in Computer Science, 2007, , 472-481.	1.0	1
111	Analysis of Microscopic Mast Cell Images Based on Network of Synchronised Oscillators. Lecture Notes in Computer Science, 2007, , 346-354.	1.0	1
112	Generation of patterns with predefined statistical properties using Cellular Neural Networks. , 2006, , .		1
113	An Analog Viterbi Decoder for PRML using Analog Parallel Processing Circuits of the CNN. , 2006, , .		4
114	Pattern detection in spectrograms by means of Cellular Neural Networks. , 2006, , .		0
115	TEXTURE GENERATION USING CELLULAR NEURAL NETWORKS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 3655-3668.	0.7	4
116	Keypoints Derivation for Object Class Detection with SIFT Algorithm. Lecture Notes in Computer Science, 2006, , 850-859.	1.0	8
117	Robust Fault Matched Optical Flow Detection Using 2D Histogram. Lecture Notes in Computer Science, 2006, , 1172-1179.	1.0	2
118	Enhanced laser image position detection of the mlm-based depth measurement system. , 2005, , .		0
119	NONLINEAR PATTERN CLASSIFICATION ASSOCIATED WITH CELLULAR NEURAL NETWORKS-BASED DYNAMIC PROGRAMMING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 169-179.	0.7	0
120	CCD Camera-Based Range Sensing with FPGA for Real-Time Processing. Lecture Notes in Computer Science, 2005, , 398-407.	1.0	2
121	High-performance Viterbi decoder with circularly connected 2-D CNN unilateral cell array. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2005, 52, 2208-2218.	0.1	15
122	Automatic detection and tracking of moving image target with CNN-UM via target probability fusion of multiple features. International Journal of Circuit Theory and Applications, 2003, 31, 329-346.	1.3	7
123	Analog addition/subtraction on the cnn-um chip with short-time superimposition of input signals. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 429-432.	0.1	9
124	Pattern Classification with Parallel Processing of the Cellular Neural Networks-Based Dynamic Programming. Lecture Notes in Computer Science, 2003, , 265-273.	1.0	1
125	Optimal path finding with space- and time-variant metric weights via multi-layer CNN. International Journal of Circuit Theory and Applications, 2002, 30, 247-270.	1.3	22
126	A Depth Measurement System Associated with a Mono-camera and a Rotating Mirror. Lecture Notes in Computer Science, 2002, , 1145-1152.	1.0	3

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127	High Speed Road Boundary Detection with CNN-Based Dynamic Programming. Lecture Notes in Computer Science, 2002, , 806-813.	1.0	4
128	Dependant distance potential source algorithm for optimal path finding with the analogic CNN. , 0, , .		0
129	Optimal path finding with space variant metric weights via multilayer CNN-UM. , 0, , .		1
130	Initiation and tracking of dim target via fusion of feature probabilities with CNN-UM. , 0, , .		0
131	High speed road boundary detection on the images for autonomous vehicle with the multi-layer CNN. , 0, , .		2
132	Very high speed Viterbi decoder with circularly connected analog CNN cell array. , 0, , .		4
133	Maximum Likelihood Decoding of the Partial Response Signal with Analog Parallel Processing Circuits of the CNN. , 0, , .		0